## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/23155

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : E04B 1/04			
US CL : 52/742.14, 745.09, 414			
According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation scarched (classification system followed by classification symbols) U.S.: 52/742.14, 745.09, 414			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT  Calcador * Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.			
Category *	Citation of document, with indication, where appropriate, of the relevant passages		1-24
Y	US 3,802,147 A (O'KONSKI) 09 April 1974 (09.04.1974), figures 1-5 and the specification.		1-24
Y	US 6,508,043 B1 (BOND et al.) 21 January 2003 (21.01.2003), figures 1-3, specification.		1-24
Y	US 4,649,682 A (BARRETT, JR. DAVE D.) 17 March 1987 (17.03.1987), figure 8.		24
Y	US 4,602,467 A (SCHILGER) 29 July 1986 (29.07.1986).		1-24
Y	US 4,909,007 A (BODNAR) 20 March 1990 (20.03.1990).		1-24
Y	US 5,526,629 A (CAVANESS) 18 June 1996 (18.06.1996).		1-24
Y	Y US 5,335,472 A 09 August 1994 (09.08.1994).		1-24
		·	
Further	r documents are listed in the continuation of Box C.	See patent family annex.	
Special categories of cited documents:     "T" later document published after the it		national filing date or priority	
"A" document defining the general state of the art which is not considered to be of particular relevance		date and not in conflict with the application principle or theory underlying the investigation.	ition but cited to understand the
i '	optication or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be considered when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		"Y"  document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being	
"O" document referring to an oral disclosure, use, exhibition or other means		obvious to a person skilled in the art	
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent	Bmily
Date of the actual completion of the international search		Date of mailing of the international search report  1 3 NOV 2005	
25 April 2005 (25.04.2005)  Name and mailing address of the ISA/IS  Authorized officer.			
Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US  Commissioner for Patents  P.O. Box 1450		D. Wildermuth for Brian Glessner	
P.O. Box 1430 Alexandria, Virginia 22313-1450  Telephone No. 571-272-6843			